

CLAIMS

1. An antimicrobial organic polymer material comprising an organic polymer material having a polymer side chain containing a unit derived from an N-alkyl-N-vinylalkylamide on a backbone of a polymer substrate, wherein triiodide ion is carried on said organic polymer material.
2. The antimicrobial organic polymer material of Claim 1 wherein the polymer side chain containing a unit derived from an N-alkyl-N-vinylalkylamide has been introduced onto a backbone of a polymer substrate by radiation-induced graft polymerization.
3. The antimicrobial organic polymer material of Claim 1 wherein the unit derived from an N-alkyl-N-vinylalkylamide is derived from one or more polymerizable monomers selected from N-vinylpyrrolidone, 1-vinyl-2-piperidone, N-vinyl-N-methylacetamide, N-vinyl-N-ethylacetamide, N-vinyl-N-methyl propylamide, N-vinyl-N-ethyl propylamide and derivatives thereof.
4. The antimicrobial organic polymer material of Claim 1 wherein the polymer substrate is composed of a polyolefin-based organic polymer.
5. The antimicrobial organic polymer material of Claim 1 in the form selected from a fiber, a woven/nonwoven fabric which is a fiber assembly and processed products thereof, fiber chips, beads, nets, films, plate members and bulk members.
6. An antimicrobial filter comprising the antimicrobial

organic polymer material of Claim 1.

7. A process for preparing an antimicrobial organic polymer material, comprising introducing a polymer side chain containing a unit derived from an N-alkyl-N-vinylalkylamide onto a backbone of an organic polymer substrate and loading triiodide ion on the resulting polymer material.

8. The process of Claim 7 wherein the polymer side chain containing a unit derived from an N-alkyl-N-vinylalkylamide is formed by graft-polymerizing a polymerizable monomer containing an N-alkyl-N-vinylalkylamide onto a backbone of a polymer substrate via radiation-induced graft polymerization.